

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended): An image forming apparatus, comprising:  
hardware resources used for image formation;  
a plurality of first applications configured to perform image formation processing;  
a platform that exists between the first applications and the hardware resources, the  
platform including an OS and at least one control service to control an execution of requested  
processing of the hardware resources according to a function call from the first applications,  
wherein interprocess communication is performed between the at least one control service  
and the first applications;  
~~a control part configured to provide common services on control of hardware~~  
~~resources to a plurality of first applications that are executed in the image forming apparatus~~  
~~using the common services provided by the control part;~~  
a virtual machine that is executed as one of the first applications;  
a second application that is executed by the virtual machine; and  
an application management part managing the second application that is executed by  
the virtual machine.
2. (Previously Presented): The image forming apparatus as claimed in claim 1,  
wherein the second application that is executed by the virtual machine operates the image  
forming apparatus by using classes for controlling the image forming apparatus.
3. (Original): The image forming apparatus as claimed in claim 2, wherein the  
classes include an operation panel class for outputting information to an operation panel of  
the image forming apparatus and for inputting information from the operation panel.

4. (Previously Presented): The image forming apparatus as claimed in claim 1, wherein the application management part includes execution management functions that include a function for launching the second application executed by the virtual machine.

5. (Previously Presented): The image forming apparatus as claimed in claim 1, wherein the second application management part downloads the application when the application is not installed in the image forming apparatus.

6. (Previously Presented): The image forming apparatus as claimed in claim 1, wherein the application management part refers to an application information file associated with the second application, and updates the second application on the basis of information in the application information file.

7. (Previously Presented): The image forming apparatus as claimed in claim 6, wherein the application management part compares a first version described in the application information file associated with the second application with a second version described in another application information file associated with an update application, and the application management part replaces the second application with the update application if the second version is newer than the first version.

8. (Previously Presented): The image forming apparatus as claimed in claim 5, wherein the application management part downloads the second application from a memory card or from a Web site.

9. (Previously Presented): The image forming apparatus as claimed in claim 6, wherein the application management part downloads the second application from a location described in the application information file associated with the second application.

10. (Previously Presented): The image forming apparatus as claimed in claim 6, wherein the application management part checks whether the second application is executable in the image forming apparatus before downloading the second application.

11. (Previously Presented): The image forming apparatus as claimed in claim 10, wherein the application management part checks whether the second application is executable on the basis of information described in the application information file associated with the second application.

12. (Previously Presented): The image forming apparatus as claimed in claim 10, wherein the application management part checks items including a resource item in the image forming apparatus necessary for executing the second application.

13. (Original): The image forming apparatus as claimed in claim 1, wherein the image forming apparatus includes a server application that receives an operation request from a terminal apparatus connected to the image forming apparatus and that operates the image forming apparatus according to the operation request.

14. (Original): The image forming apparatus as claimed in claim 13, wherein the application management part communicates with the terminal apparatus.

15. (Previously Presented): A terminal apparatus that operates an image forming apparatus configured to be able to include a plurality of applications, the terminal apparatus comprising:

a virtual machine;

an application that is executed by the virtual machine and that operates the image forming apparatus by using classes for controlling the image forming apparatus, the classes including a function for displaying, on the terminal apparatus, an emulated screen of a screen displayed on an operation panel of the image forming apparatus; and

an application management part managing the application that is executed by the virtual machine.

16. (Previously Presented): The terminal apparatus as claimed in claim 15, wherein the terminal apparatus is connected to the image forming apparatus via a network.

17. (Original): The terminal apparatus as claimed in claim 15, wherein the terminal apparatus operates the image forming apparatus by using a Java based distributed object processing technique.

18. (Canceled).

19. (Original): The terminal apparatus as claimed in claim 15, wherein the terminal apparatus has a function for allowing a user to select whether to access a hard disk of the image forming apparatus or to access a hard disk of the terminal apparatus.

20. (Original): The terminal apparatus as claimed in claim 15, wherein the application management part includes execution management functions that include a function for launching the application.

21. (Original): The terminal apparatus as claimed in claim 20, wherein the application management part downloads the application when the application is not installed in the terminal apparatus by communicating with the image forming apparatus.

22. (Original): The terminal apparatus as claimed in claim 15, wherein the application management part refers to an application information file associated with the application, and updates the application on the basis of information in the application information file.

23. (Original): The terminal apparatus as claimed in claim 15, wherein the application management part downloads the application from a memory card that is inserted in the image forming apparatus or from a Web site.

24. (Original): The terminal apparatus as claimed in claim 23, wherein the application management part receives file information stored in the memory card and displays the file information on the terminal apparatus.

25. (Original): The terminal apparatus as claimed in claim 23, wherein the application management part sends URL information input into the terminal apparatus to the image forming apparatus, so that the image forming apparatus downloads the application from the Web site by using the URL information.

26. (Currently Amended): A method for operating an image forming apparatus configured to ~~be able to~~ include a plurality of applications by using an application that is executed on a terminal apparatus connected to the image forming apparatus via a network, the method comprising:

performing image formation using hardware resources of the image forming apparatus;

performing image formation processing at the plurality of applications of the image forming apparatus;

controlling an execution of requested processing of the hardware resources according to a function call from the applications at at least one control service located in a platform that includes an OS and exists between the applications and the hardware resources, wherein interprocess communication is performed between the at least one control service and the applications, and wherein the image forming apparatus includes a virtual machine that is one of the plurality of applications and a server application executed by the virtual machine, and the terminal apparatus includes a virtual machine and the application[[,]] ; and

~~wherein the server application receives~~ receiving, at the server application, an operation request sent by the application in the terminal apparatus, so that the server application operates the image forming apparatus according to the operation request.

27. (Original): The method as claimed in claim 26, wherein the terminal apparatus operates the image forming apparatus by using a Java based distributed object processing technique.

28. (Original): The method as claimed in claim 26, wherein the image forming apparatus includes an application management part for managing the application, and the terminal apparatus includes a remote application management part for managing the application by communicating with the application management part.

29-47. (Canceled).

48. (Currently Amended): A computer readable recording medium storing a computer program executed in an image forming apparatus that includes hardware resources used for image formation, a plurality of first applications configured to perform image formation processing, and a platform that exists between the first applications and the hardware resources, the platform including an OS and at least one control service to control an execution of requested processing of the hardware resources according to a function call from the first applications, wherein interprocess communication is performed between the at least one control service and the first applications ~~a control part configured to provide common services on control of hardware resources to a plurality of first applications that are executed in the image forming apparatus using the common services provided by the central part,~~ the computer program comprising:

virtual machine program code that is executed as one of the first applications; and  
application management program code managing a second application executed by the virtual machine program code.

49. (Previously Presented): The computer readable recording medium as claimed in claim 48, wherein the computer program includes classes that are used by the second application and that controls the image forming apparatus.

50. (Original): The computer readable recording medium as claimed in claim 49, wherein the classes includes an operation panel class for outputting information to an operation panel of the image forming machine and for inputting information from the operation panel.

51. (Previously Presented): The computer readable recording medium as claimed in claim 48, wherein the application management program code includes execution management functions that include a function for launching the second application.

52. (Previously Presented): The computer readable recording medium as claimed in claim 51, wherein the application management program code downloads the second application when the second application is not installed in the image forming apparatus.

53. (Previously Presented): The computer readable recording medium as claimed in claim 48, wherein the application management program code refers to an application information file associated with the second application, and updates the second application on the basis of information in the application information file.

54. (Previously Presented): The computer readable recording medium as claimed in claim 53, wherein the application management program code compares a first version described in the application information file associated with the second application with a second version described in another application information file associated with an update application, and the application management program code replaces the second application with the update application if the second version is newer than the first version.



55. (Previously Presented): The computer readable recording medium as claimed in claim 53, wherein the application management program code downloads the second application from a location described in the application information file associated with the second application.

56. (Previously Presented): The computer readable recording medium as claimed in claim 53, wherein the application management program code checks whether the second application is executable in the image forming apparatus before downloading the second application.

57. (Previously Presented): The computer readable recording medium as claimed in claim 56, wherein the application management program code checks whether the second application is executable on the basis of information described in the application information file associated with the second application.

58. (Previously Presented): The computer readable recording medium as claimed in claim 56, wherein the application management program code checks items including a resource item in the image forming apparatus necessary for executing the second application.

59. (Original): The computer readable recording medium as claimed in claim 48, wherein the computer program further includes a server application program that receives an operation request from a terminal apparatus connected to the image forming apparatus and that operates the image forming apparatus according to the operation request.

60. (Previously Presented): A computer readable recording medium storing a computer program executed in a terminal apparatus that operates an image forming apparatus configured to be able to include a plurality of applications, the computer program comprising:

virtual machine program code; and

application management program code managing an application that is executed by the virtual machine program code, wherein the computer program includes classes that are used by the application and that control the image forming apparatus, the classes include a function for displaying, on the terminal apparatus, an emulated screen of a screen displayed on an operation panel of the image forming apparatus.

61. (Canceled).

62. (Original): The computer readable recording medium as claimed in claim 60, wherein the computer program causes the terminal apparatus to operate the image forming apparatus by using a Java based distributed object processing technique.

63. (Canceled).

64. (Currently Amended): The computer readable recording medium as claimed in claim 60, wherein the application management program code ~~means~~ includes execution management functions that include a function for launching the application.

65. (Previously Presented): The computer readable recording medium as claimed in claim 64, wherein the application management program code downloads the application

when the application is not installed in the terminal apparatus by communicating with the image forming apparatus.

66. (Previously Presented): The computer readable recording medium as claimed in claim 60, wherein the application management program code refers to an application information file associated with the application, and updates the application on the basis of information in the application information file.